

WE CLAIM:

1. A mixing apparatus for use with a supply of particulate material and a flow of gas, said apparatus comprising:

a hollow receptacle defining a chamber including a lower portion for receiving said supply of particulate abrasive material and an upper portion contiguous with and overlying said lower portion, the receptacle having an inlet port formed therethrough contiguous with the lower portion of the chamber and an outlet port formed therethrough contiguous with the upper portion of the chamber;

support means for supporting the receptacle for vibratory movement;

gas input means for receiving the flow of gas and delivering same to the inlet port; and

vibratory means for effecting said vibratory movement of the receptacle in a manner sufficiently vigorous to create a dispersion of said particulate material through which gas delivered to the inlet port can diffuse to the outlet port, at least a portion of said dispersion being fluidized so as to issue, with said gas, through the outlet port as a flow of gas having particulate material entrained therewithin.

2. A mixing apparatus according to claim 1, wherein the receptacle includes a tubular side wall, a tube cap and a tube bottom wall, the side wall extending between and defining vertically spaced-apart tube ends occluded, respectively, by the tube cap and the tube bottom wall.

3. A mixing apparatus according to claim 2, wherein the side wall includes an upper section which, in combination with the tube cap defines the upper portion of the chamber, and a lower section which, in combination with the tube bottom wall defines the lower portion of the chamber.
4. A mixing apparatus according to claim 3, wherein the inlet receptacle is formed through the tube bottom wall.
5. A mixing apparatus according to claim 4, wherein the inlet receptacle is formed through the tube bottom wall adjacent to the side wall.
6. A mixing apparatus according to claim 5, wherein the outlet port is formed through the upper section of the side wall.
7. A mixing apparatus according to claim 5, wherein the side wall is cylindrical.
8. A mixing apparatus according to claim 6, wherein the support means comprises a base and one or more legs, each of said one or more legs extending between and operatively connecting the base to the receptacle.
9. A mixing apparatus according to claim 8, wherein each of said one or more legs is comprised of a spring.
10. A mixing apparatus according to claim 9, wherein said one or more legs numbers two or more.
11. A mixing apparatus according to claim 10, wherein the vibratory means comprises a shaker operatively rigidly mounted to the receptacle.

12. A mixing apparatus according to claim 11, wherein the shaker is a pneumatic shaker.
13. A mixing apparatus according to claim 11, wherein the receptacle is mounted on a platform, and each of said one or more legs extends between and connects the base to the platform.
14. A mixing apparatus according to claim 13, wherein the shaker is mounted on the platform.
15. A mixing apparatus according to claim 14, wherein said gas input means comprises a tube having a first end adapted to receive said flow of gas and a second end coupled to the gas inlet.